CAS 71-36-3

Substance name n-Butanol

Toxicity

Workplace exposures to n-butanol have been associated with eye, nose and throat irritation and neurological effects such as dizziness, vertigo, and hearing impairment.[1,2] It is classified by Reprotext as a "A-" reproductive hazard.[3] In animals, fetotoxicity and teratogenicity was observed at high doses by both the inhalation and oral routes of exposure.[4,5,6,7]

Exposure

N-butanol is a widely used industrial solvent used for paints, lacquers, varnishes, resins and dyes.[2] Product testing by the Danish government detected n-butanol in several categories of children's products including slimy toys, children's tents , coatings on wooden toys , and a scented rubber toy.[8] N-butanol is listed as an ingredient in paints, sharpie markers, dry erase markers, and nail products in the National Library of Medicine Household Products Database.[9] N-butanol occurs naturally as a product of carbohydrate fermentation and is present in food.[10]

References

1. American Conference of Governmental Industrial Hygienists, Inc. Documentation of the Threshold Limit Values and Biological Exposure Indices. 6th ed. Volumes I, II, III. Cincinnati, OH: ACGIH, 1991., p. 170.
2. U.S. EPA, Office of Prevention, Pesticides, and Toxic Substances. Inert reassessment for n-butanol and isobutyl alcohol. 2005. http://www.epa.gov/opprd001/inerts/butanol.pdf
3. "n-butanol" in REPROTEXT Database Version 5.1 Greenwood Village, CO: Thomson Reuters (Healthcare) Inc. (accessed 2009).
4. Nelson et al. (1989) Lack of selective developmental toxicity of three butanol isomers administered by inghalation to rats. *Fundam. Appl Toxicol* 12(3):469-79.
5. Nelson et al. (1990) Developmental toxicology of industrial alcohols: a summary of 13 alcohols administered by inhalation. *Toxicol Ind Health* 6 (3-4): 373-87.
6. Sitarek K, Berlińska B, Barański B. (1994) Assessment of the effect of n-butanol given to female rats in drinking water on fertility and prenatal development of their offspring. *Int J Occup Med Environ Health*. 7(4):365-70.
7. Ema, M et al. (2005) Evaluation of developmental toxicity of 1-butanol given to rats in drinking wtaer throughout pregnancy. *Food Chem Toxicol* 43:325-31.
8. Danish Ministry of the Environment, Environmental Protection Agency. Survey of Chemical Substances in Consumer Products Reports 46, 60, 67, 68. 2004-2006. http://www.mst.dk/English/Chemicals/Consumer_Products/Surveys-on-chemicals-in-consumer-products.htm
9. National Institutes of Health, National Library of Medicine, Household Products Database. http://householdproducts.nlm.nih.gov/ Accessed May 2010.
10. National Institutes of Health, National Library of Medicine Hazardous Substances Data Bank http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB Accessed May 2010.